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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/211,538 | 12/15/98 | ZHAO | Z 3064-128 |

MM92/0521

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EXAMINER

ANDERSEN, H

ART UNIT

PAPER NUMBER

2862

DATE MAILED:

05/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Notice of Allowability

Application No.
09/211,538

Applicant(s)

Zhao

Examiner
Henry Andersen

Art Unit
2862



--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Apr 20, 2001
2. ☒ The allowed claim(s) is/are 1-4, 6-9, 11-13, and 15-35
3. ☐ The drawings filed on _____ are acceptable as formal drawings.
4. ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
a) ☐ All b) ☒ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
*Certified copies not received: _____
5. ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE FOR SUBMITTING NEW FORMAL DRAWINGS, OR A SUBSTITUTE OATH OR DECLARATION. This three-month period for complying with the REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL is extendable under 37 CFR 1.136(a).**

6. ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
7. ☒ Applicant MUST submit NEW FORMAL DRAWINGS
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No. _____
(b) ☒ including changes required by the proposed drawing correction filed Apr 20, 2001, which has been approved by the examiner.
(c) ☐ including changes required by the attached Examiner's Amendment/Comment or in the Office action of Paper No. _____

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

8. ☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any reply to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- | | |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449), Paper No(s). _____ | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 9 <input type="checkbox"/> Other | |

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DETAILED ACTION

Response to Amendment

1. The amendment filed April 20, 2001, concerning a second substitute specification and the claims has been entered.

Drawings

2. The proposed drawing corrections filed April 20, 2001, concerning Figures 6B, 15A, 23A, 23B, and 24C are approved. The application having been allowed, new formal drawings including these approved drawing corrections are required in response to this Office action.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The references in this examiner's amendment are to the clean form copy.

A. With regard to the abstract, in line 2 the word "transducers" should be deleted, and in its place should be inserted the singular --transducer--.

B. With regard to the last line (line 11) of the abstract, the verb --is-- should

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be inserted prior to the word "disposed."

Authorization for this examiner's amendment was obtained in a telephone interview with Brad A. Schepers, Esq.; of Woodard, Emhardt, Naughton, Moriarty & McNett; Indianapolis, Indiana; on May 11, 2001.

Allowable Subject Matter

4. Claims 1-4, 6-9, 11-13, and 15-35 are allowable. Claims 1, 6, 11, 15, 20 and 28 are independent claims which are allowable because the prior art does not anticipate all the elements of each of these claims. Claims 2 through 4, 7 through 9, 12, 13, 16 through 19, 21 through 27, and 29 through 35 are dependent claims that add elements to their respective allowable independent claims, and therefore they too are allowable. Claims 1, 6, 11, 15, 20 and 28 claim a magnetic rotational position sensor comprising a loop pole piece connected to a rotating shaft and having one or more flux generating magnets disposed in various positions in the air gap area of the loop pole piece, and at least one magnetic flux sensitive transducer also disposed in the air gap area of the loop pole piece to measure the change in flux as the loop pole piece undergoes rotation simultaneously with its connected shaft and its various flux generating magnets disposed within the air gap area of the loop pole piece. The prior art does not reveal a magnetic rotational position sensor comprising a loop pole piece having one or more flux generating magnets and one or more flux sensitive transducers disposed in the air gap area of the loop pole piece in the manner disclosed in the application under examination. In particular, the prior art does not


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disclose such a magnetic rotational position sensor wherein the inner surfaces of the pole pieces and both surfaces of the magnet(s) are contoured to arcuately configure the air gap area.


5. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication from the examiner should be directed to Henry Andersen whose telephone number is (703) 308-6251. The examiner can normally be reached Monday through Friday between 8:30 A.M. and 5:00 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 and (703) 308-7724.


HSA

May 17, 2001


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800